

MODULE DESCRIPTION

General

School	Geotechnical Sciences
Department	Forest and Natural Environment Sciences

Module Information

Title	Applied Mechanics
Course Code	B.Y.2
Level of Studies	Undergraduate
Teaching Period	Second Semester
Attendance Type	General Foundation / General Knowledge / Skills Development
Prerequisites	-

Orientation	Weekly Hours		Year	Semester	ECTS
	Lectures	Laboratory work			
Landscape Architecture and Restoration of landscape	4		1	B	4

Faculty Instructor

Dr. Ing. Dimitrios Kaziolas

Type of Module

- General Foundation
- Specific Foundation / Core
- Knowledge Deepening / Consolidation

Mode of Delivery

- Face to face
- Distance learning

Digital Module availability

- E-Study Guide
- Departments Website
- E-Learning

Language

	Teaching	Examination
Greek	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
English	<input type="checkbox"/>	<input type="checkbox"/>

Erasmus

- The course is offered to exchange programme students

Learning Outcomes

After the successful completion of the course, the student is expected to:

- calculate forces on load carriers
- consider the balance of institutions
- cultivate critical thinking through verification of results
- calculate cross-section loads and stresses on load carriers

List of General Competences

- Apply knowledge in practice
- Work autonomously
- Work in teams
- Work in an international context
- Work in an interdisciplinary team
- Respect natural environment
- Advance free, creative and causative thinking

Module Content (Syllabus)

Forces- its characteristics, forces systems (plane-central forces). Analysis- synthesis of forces. Diagram of free body. Conditions of equilibrium of forces. Moment of forces. Couple of forces. Stereostatic equilibrium equations. String polygon, joint reactions. Friction. Determinate Structures. Simple triangulated lattice girders. Cross section loads (N, Q, M). Basic principles of strength of materials (stresses and type of them, strains). Center of gravity. Moments of inertia and resistance moment. Calculation of normal and shear stresses of rectangular cross section when loaded with bending.

Educational Material Types

- Book
- Notes
- Slide presentations
- Video lectures
- Multimedia
- Interactive exercises
- Other:

Use of Information and Communication Technologies

- Use of ICT in Course Teaching

- Use of ICT in Laboratory Teaching
- Use of ICT in Communication with Students
- Use of ICT in Student Assessment

Module Organization

Please fill in the workload of each course activity

Course Activity	Workload (hours)
Lectures	39
Laboratory work	35
Field Trip/Short Individual Assignments	-
Independent Study	26
Total	100

* 1 ECTS unit corresponds to 25 hours of workload

Student Assessment Methods

- Written Exam with Multiple Choice Questions
- Written Exam with Short Answer Questions
- Written Exam with Extended Answer Questions
- Written Assignment
- Report
- Oral Exams
- Laboratory Assignment

Suggested Bibliography (Eudoxus and additional bibliography)

1. Apostolos Polyzakis, Static and Strength of Materials, APOSTOLOS POLYZAKIS Publications (2015), ISBN: 978-960-98311-4-7